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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,831	07/21/2000	TERENCE JAMES DAVEY	5017-5179	2071

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EXAMINER

PIAZZA, GLADYS J

ART UNIT	PAPER NUMBER
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1733

6

DATE MAILED: 02/27/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/600,831

Applicant(s)

DAVEY, TERENCE JAMES

Examiner

Gladys J. Piazza

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The specification recites that the vacuum level is "2-5 mb Abs" on page 4, line 31; "5-2 mb Abs" on page 5, line 34; and "2.0 Mb absolute" on page 10, line 26. It appears as though Applicant intended to recite "2-5 mb Abs" on page 5, line 34; and "2.0 mb absolute" on page 10, line 26.

Appropriate correction is required.

Claim Objections

2. Claim 12 is objected to because of the following informalities: Claim 12 recites 5 to 2 mb Abs" in lines 3-4. It appears as though Applicant intended to recite "2 to 5 mb Abs". Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites the limitations "the edges" in line 4; "the gaseous contents" in line 8. There is insufficient antecedent basis for these limitations in the claim. It is suggested to amend to --edges--; --gaseous contents--.

b. Claim 3 is unclear by reciting,

Art Unit: 1733

c. Claim 4 recites the limitation "the extraction facility" in line 3. There is insufficient antecedent basis for these limitations in the claim. It is suggested to amend to --the extraction of the gaseous contents--.

d. Claim 10 recites the limitations "the edges" in line 2; "the hull" in line 4; "the gaseous contents" in line 6. There is insufficient antecedent basis for these limitations in the claim. It is suggested to amend to --edges--; --the boat hull--; --gaseous contents--.

e. Claim 15 recites the limitation "the method" in line 3. There is insufficient antecedent basis for this limitation in the claim. There is no method in the apparatus claim.

f. Claim 16 recites the limitations "the edges" in line 2. There is insufficient antecedent basis for these limitations in the claim. It is suggested to amend to --edges--

g. Claim 17 recites the limitations "the layer" in line 4; "the gaseous contents" in line 5. There is insufficient antecedent basis for these limitations in the claim. It is suggested to amend to --impermeable sheet material--; --gaseous contents--.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-5, 11-14, 16, 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Leobon (FR 2693147).

Leobon discloses a method of treating a product which is made of a material which has been applied to the surface in liquid form (binder material) and thereafter dried or cured to make the product ready for use (heat-polymerisable binder), where a sheet of impermeable sheet material (membrane 68) is secured to a surface of the product (tight beading 70) to enclose a space (heated carpet 48 forms a space between the membrane and the surface of the product), heating is applied within the space (heated carpet 48), and the gaseous contents of the space are continuously extracted while the sheet is spaced from the surface (vacuum pump 72). As to claim 3, the edges of the membrane 68 form an airtight seal (page 11, line 1). As to claim 4, a vacuum pump is connected to the space (vacuum pump 72). As to claim 5, vacuum is produced before applying heat (page 11, line 35 to page 12, line 15). As to claim 11, Leobon discloses an apparatus comprising an impermeable sheet (membrane 68), means for securing the sheet to a surface of the product (tight beading 70), means for holding the sheet spaced from the surface (heated carpet 48) to allow gas and vapor to be extracted (vacuum pump 72), and heating means for applying heat (heated carpet 48). As to claim 12, Leobon discloses a vacuum pump and it is considered that the pump is capable of working down to pressures of 2-5 mb abs. As to claim 13, the heating means includes a thermostat and a controller (temperature probe 32, control center 30). As to claim 14, it is considered that the sheet material layer has thermal insulation properties. As to claim 16, the edges of the sheet material form an air tight seal against the surface (page 11, line 1). As to claim 17, the product is molded form fiber reinforced plastics (page 1, lines 12-15).

Art Unit: 1733

5. Claims 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Wuepper et al. (US Patent No. 5, 023,987).

Wuepper discloses an apparatus with an impermeable sheet (vacuum bag 130), means for securing the sheet to a surface and enclosing a space (sealing tape 132), means for holding the sheet spaced from the surface to allow gas and vapor to be extracted(134, 136, 138, 140, 142), and heating means (heating blanket 146). As to claim 12, it is considered the vacuum in Wuepper is capable of such vacuum ranges.

6. Claims 11, 12, 14, 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Newsom (US Patent No. 4,554,036).

Newsom discloses an apparatus with an impermeable sheet (10), means for securing the sheet to a surface and enclosing a space (16, 14), means for holding the sheet spaced from the surface to allow gas and vapor to be extracted(16, 14, 30), and heating means (30). As to claim 12, it is considered the vacuum in Wuepper is capable of such vacuum ranges. As to claim 14, the sheet has thermo insulation properties. As to claim 15, sheets can be of differing shapes and sizes (column 5, lines 34-43).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 7, 12, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leobon as applied to claims 1 and 11 above.

Leobon discloses a method of treating a composite material of glass fibers with polyester (page 1). However, Leobon does not specifically disclose the particular vacuum level as claimed. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply a vacuum within the conventional ranges for treating composite materials. Only the expected results would be attained by providing such ranges and the range of vacuum applied is dependent only upon the materials used and the length of time the vacuum is applied. Selecting such a range is well within the purview of one of ordinary skill in the art. As to the particular temperature ranges, Leobon discloses temperatures within this range. It would have been obvious to one of ordinary skill in the art to apply such a temperature range according to the particular materials used and the length of time the heat is applied. Only the expected results would be attained. As to claim 12, Leobon does not disclose the level of pressure the vacuum pump can be applied. However, the ranges claimed are within conventional ranges and it is considered that the vacuum pump in Leobon is capable of providing such ranges. Only the expected results would be attained from providing a pump of such capabilities. As to claim 14, it would have been obvious to one of ordinary skill in the art that the sheet member in Leobon has thermal insulation properties particularly since it is a vacuum sheet for applying heat, only the expected results would be attained.

9. Claims 1, 3-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art in view of Leobon (FR 2693147).

The Admitted Prior Art discloses that it is known to repair boat hulls formed of glass fiber and polyester composites by removing any damaged portion of the hull and then replacing with new gel coat.

Leobon discloses a method of repairing composites of the same materials as boat hulls as discussed above. It would have been obvious to one of ordinary skill in the art at the time of the invention to repair the boat hull as disclosed in the Admitted Prior Art as shown by Leobon as a method of treating composites of the same materials in order to properly cure the repair. As to claims 3-7 see discussion above.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leobon or the Admitted Prior Art in view of Leobon as applied to claim 1 above, and further in view of Wuepper et al. (US Patent No. 5,023,987).

Leobon discloses securing the sheet to the surface with a tight bead 70. It is well known to secure a vacuum apparatus to a surface using adhesive tape. Wuepper discloses one example where an adhesive tape is used to secure the vacuum sheet to the repair surface (column 5, lines 9-10). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a method of treating a surface as shown by Leobon by using an adhesive tape to secure the vacuum sheet to the surface as is well known and exemplified by Wuepper as an equivalent alternative to the bead shown in Leobon. Only the expected results would be attained.

11. Claims 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leobon or the Admitted Prior Art in view of Leobon as applied to claims 1 and 11 above,

and further in view of Wengler et al. (US Patent No. 4,352,707) and Mahon et al. (US Patent No. 3,837,965).

Leobon discloses a vacuum apparatus with a sheet that is capable of forming a tight seal with a surface by using a tight bead 70. However it is well known to use materials for the sheet that adhere to the surface without additional securing means (although not clearly claimed - disclosed in the specification as such). Wengler and Mahon both discloses examples of vacuum means where the sheet is formed of a material that forms an airtight seal without additional securing means (Wengler: column 3, lines 39-42; Mahon: column 2, lines 64-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to perform the method of Leobon with a sheet material capable of forming a tight seal with the surface of the product as is well known and a equivalent alternative to providing additional securing means as exemplified by Wengler and Mahon.

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leobon as applied to claim 11 above, and further in view of Newsom (US Patent No. 4,554,036).

Newsome discloses it is known to form a vacuum apparatus such as the on in Leobon with sheets of differing shapes and sizes (column 3, lines 49-53). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the apparatus as shown by Leobon with sheets of differing shapes and sizes as shown by Newsom in order to accommodate differing shaped surfaces.


Art Unit: 1733


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gladys J. Piazza whose telephone number is (703) 305-1271. The examiner can normally be reached on M-F 8am-5:30pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Gladys Piazza
February 25, 2002


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700